





Protocols and Definitions Device-associated Module

Catheter-associated Urinary Tract Infections

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Target Audience

- This training session is designed for those who will collect and analyze Catheter-associated UTIs Patient Safety Component of NHSN. This may include:
 - NHSN Facility Administrator
 - Patient Safety Primary Contact
 - Infection Control Professional (ICP)
 - Epidemiologist
 - Microbiologist
 - Data entry staff

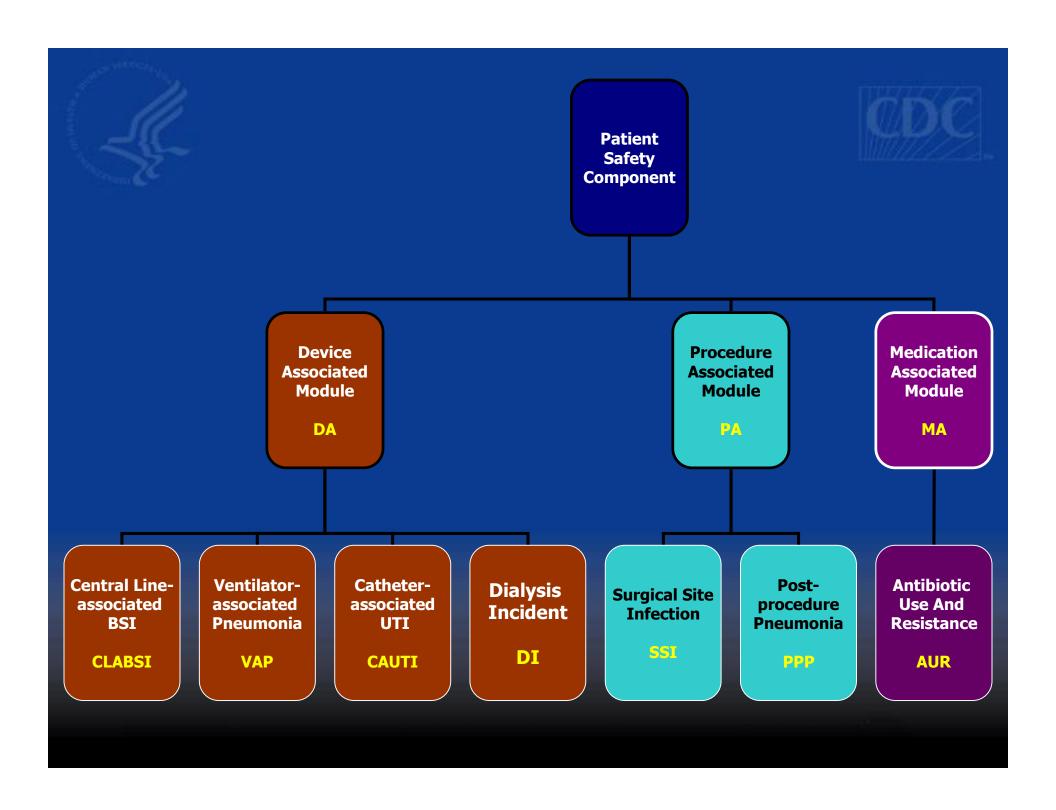


- Outline the structure, methodology and purpose of the Device-associated Module of NHSN
- Describe the protocols and definitions used in the CAUTI option within the Device-associated Module

http://www.cdc.gov/ncidod/dhqp/nhsn_members.html

Surveillance for DA HAI

- Active (vs. passive)
 - Trained ICPs look for and identify infections
 - Accumulate information from multiple data sources
- Patient-based (vs. laboratory-based)
 - Not based solely on laboratory data
 - Identification of risk factors, patient care procedures
- Prospective (vs. retrospective)
 - Monitor patients during their hospitalization when possible







Catheter-Associated Urinary Tract Infection

CAUTI

CAUTI

- Most common site of HAI more than 40% of all reported infections
- Almost all are caused by instrumentation
- Complications from CAUTI
 - Discomfort
 - Prolonged hospital stay
 - Increased cost
- CDC/HICPAC Guideline for Prevention of Catheter-associated Urinary Tract Infection

http://www.cdc.gov/ncidod/dhqp/gl_catheter_assoc.html

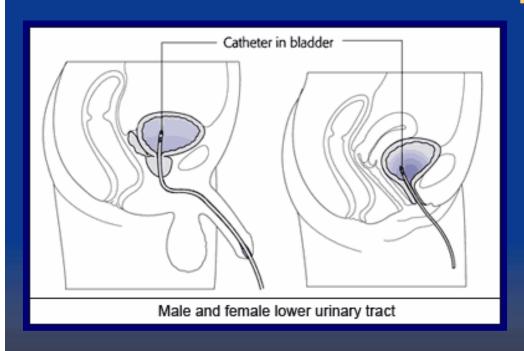
Use CDC Definitions for the following:

- CAUTI
- Indwelling catheter
- SUTI
- ASB Criterion 1

Definition: CAUTI

- UTI that occurs in a patient who had an indwelling urethral urinary catheter in place within the 7-day period before the onset of the UTI.
- If the UTI develops in a patient within 48 hours of discharge from a location, indicate the discharging location on the infection report, not the current location of the patient

Definition: Indwelling Catheter



- A drainage tube that is inserted into the urinary bladder through the urethra, is left in place, and is connected to a closed collection system
 - Also called a Foley catheter
 - Does not include straight in and out catheters or urinary catheters that are not placed in the urethra.

CAUTI Infection Data

- CAUTI specific events* can be:
 - SUTI (Symptomatic UTI)
 - ASB (Asymptomatic Bacteriuria)
 - Criterion #1 only

*NOTE: ASB Criterion #2 and Other UTI (OUTI) are types of UTI-specific event, but they are not associated with a urinary catheter and are not used when collecting data for CAUTI events.

Symptomatic UTI (SUTI) - Any patient

Patient has at least one of the following signs or symptoms with no other recognized cause: Fever (>38°C), urgency, frequency, dysuria, or suprapubic tenderness

And

Patient has a positive

Patient has a positive urine culture, that is ≥10⁵ microorganisms per cc of urine with no more than two species of microorganisms.

Patient has at least <u>two</u> of the following signs or symptoms with no other recognized cause: Fever (>38°C), urgency, frequency, dysuria, or suprapubic tenderness

And

At least one of the following:

- a. Positive dipstick for leukocyte esterase and/or nitrate
- b. Pyuria (urine specimen with ≥10 wbc/mm³ or ≥3 wbc/high power field of unspun urine
- c. Organisms seen on Gram stain of unspun urine
- d. At least two urine cultures with repeated isolation of the same uropathogen with ≥10² colonies/ml in nonvoided specimens
- e. ≥10⁵ colonies/ml of a single uropathogen in a patient being treated with an effective antimicrobial agent for a UTI
- f. Physician diagnosis of a UTI
- g. Physician institutes appropriate therapy for a UTI

or

Symptomatic UTI (SUTI) Patient ≤1 year of age

Patient ≤ 1 year of age has at least one of the following signs or symptoms with no other recognized cause: fever (>38°C rectal), hypothermia (<37°C rectal), apnea, bradycardia, dysuria, lethargy, or vomiting and

Patient has a positive urine culture, that is, $> 10^5$ microorganisms per cc of urine with no more than two species of microorganisms.

or

At least one of the following:

- positive dipstick for leukocyte esterase and/or nitrate
- pyuria (urine specimen with > 10 wbc/mm 3 or ≥ 3 wbc/high power field of unspun urine)
- organisms seen on Gram stain of unspun urine at least two urine cultures with repeated isolation of the same uropathogen with > 10² colonies/ml in nonvoided specimens
- ≤ 10⁵ colonies/ml of a single uropathogen in a patient being treated with an effective antimicrobial agent for a urinary tract infection
- physician diagnosis of UTI
- physician institutes appropriate therapy for UTI.

Asymptomatic Bacteriuria (ASB) Any Patient

Patient has had an indwelling urinary catheter within 7 days before the culture <u>and</u>

patient has a positive urine culture, that is, ≥ 10⁵ microorganisms per cc of urine with no more than two species of microorganisms and

patient has <u>no</u> fever (>38°C), urgency, frequency, dysuria, or suprapubic tenderness

Example of Completed UTI Form



Page 1 of 2

Urinary Tract Infection (UTI) Form

OMB No. 0920-0666 Exp. Date: 02-29-2008

* required for saving **required for completion *Facility ID: 000000 *Event #: 223 Social Security #: *Patient ID#: 630010 Secondary ID#: Patient Name Last: Smith Middle: First: Jane *Gender: F *Date of Birth: 04/13/2000 *Date of Event: 01/17/2006 *Event Type: UTI Date of Procedure: *Post-procedure UTI: Yes No NHSN Procedure Code: ICD-9-CM Code: *Location: *Date Admitted to Facility: Risk Factors *Urinary Catheter: No Event Details *Specific Event: Asymptomatic bacteriuria (ASB) X Symptomatic UTI (SUTI) Other UTI (OUTI) *Secondary Bloodstream Infection: Yes **Died: UTI Contributed to Death: Yes No No *Pathogens Identified: Discharge Date: 01/21/2006 Yes No

*If Yes, specify on page 2

CAUTI Denominator Data

- For ICU, SCA and Regular Ward locations
 - # patients on the unit, collected at the same time each day
 - # patients on the unit with an indwelling urinary catheter, collected at the same time each day
- Not monitored in NICU locations



Denominators for Intensive Care Unit (ICU)/ Other locations (not NICU or SCA)

OMB No. 0920-0666 Exp. Date: 02-29-2008

	D#:	`							
Location Code:		Month:							
Date	Number of patients	Number of patients with 1 or more central lines	Number of patients with urinary cath		patient	Number of patients on a ventilator			
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Analysis: CAUTI Rate

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CAUTI Rate = #CAUTIs identified* X 1000  
# indwelling urinary catheter days*
```

Stratify by:

Type Location

Analysis: Device Utilization (DU) Ratio

Urinary Catheter DU Ratio # Indwelling catheter days
Patient Days

DU Ratio measures the proportion of total patient-days in which indwelling urinary catheters were used



National·Healthcare·Safety·Network :

 $Rate \cdot Table \cdot for \cdot Catheter - Associated \cdot UTI \cdot Data \cdot for \cdot ICU - Other / SCA =$

As-of: November 14, 2006 at 11:38-AM=

Date Range: CAU_RATESICU_SCA-summary YM 2006M06-to 2007M07=

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Org/ID=10000¶

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Ĭ	SICU		533×			0.3164×	18×			0.82×		_	×
- 4													4





Questions?

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